

## Child-Resistant Containers

Poisons kill about 500 children a year. Public education programs have failed to reduce the mortality and morbidity of ingestions. Preventing access to medicines and household products by the child is effective.

"Palm-N'-Turn" safety caps, which require pressure and turning to open, cannot be removed by children under four years old. Use of them does not increase cost of containers now being used for solids and liquids. Legislation requiring safety caps on containers of medications and toxic household items has been introduced into Congress.

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S 3547, 90th Congress, Second Session, Senator Warren Magnuson, May 27, 1968  
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## Slow Virus Infections

About 15 years ago, Sigurdsson proposed the idea of "slow infections" in sheep in Iceland. A progressive pathological process was caused by agents which had a long incubation period of months or years. In the past five years Gajdusek and Gibbs have produced clear evidence that certain chronic neurologic diseases are slowly progressive viral infections. "Scrapie" in sheep may appear three or four years after inoculation, and in "Kuru" in human beings it may be even longer before a neurological illness is evident. Dawson's "inclusion encephalitis" recently has been shown to be caused by the measles virus; this devastating neurologic syndrome occurs months or years following the initial childhood measles.

The hallmarks of measles virus — cytoplasmic and nuclear inclusion bodies and multinucleated giant cells — have been found in all forms of measles encephalitis from acute toxic to sequelar forms in which death occurs years later. Measles antibodies have been demonstrated in increased amounts in patients with multiple sclerosis (MS) as compared with control subjects; and similar pathologic findings in some patients with MS sug-

gest that the measles virus may be a slow or persistent viral infection related *in some way* to this tragic neurological disease.

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## Undernutrition and Child Development

For a number of years evidence has been accumulating indicating that the growing child is particularly vulnerable to undernutrition. This peculiar vulnerability is perhaps best described as a curtailment in a number of factors of growth and development which may be permanent even if the child is subsequently rehabilitated. Severe undernutrition during the first year of life (infantile marasmus) will permanently stunt growth, prevent the normal increase in head circumference, retard bone age and slow down the rate of cell division and myelin synthesis in brain. Data from a number of widely varying sources also strongly suggest that children who have survived a period of severe malnutrition early in infancy are retarded in their development. Permanent deficits in perceptual development and cognitive function have been described in these infants. These deficits remained even after long periods of rehabilitation. Studies are in progress to determine exactly the severity and duration of undernutrition that is necessary to produce these effects.

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## Valium in the Treatment of Epilepsy

Diazepam (Valium®), a tranquilizer-muscle relaxant in the same family with Librium® and Magodon®, has proved very valuable in the treatment of status epilepticus. Many neurologists con-

sider it the drug of choice, now to be used in preference to paraldehyde, especially in children. For severe and intractable seizures, intravenous slow drip of 100 mg and 500 ml of normal saline solution is recommended with the total dose initially being 10 to 15 mg per square meter of body surface. The most significant side effects are moderate hypotension and mild respiratory depression, both most commonly seen in adults and in conjunction with barbiturates or paraldehyde. Diazepam has also proved useful as an oral adjunct with other drugs in the long-term control of convulsive disorders.

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### Growth Retardation in Environmental Deprivation

Environmental deprivation is perhaps the most frequent cause of growth failure in infancy. In older children it is less frequent as a cause of growth failure. If careful history taking, careful physical examination and simple laboratory testing (blood cell count, urinalysis, serum urea, protein-bound iodine) fail to reveal an organic cause, environmental deprivation should be considered. Infants with mental retardation may not grow adequately whether they are deprived or not. Admission to a hospital may be necessary to determine if an infant can gain weight if adequately nourished and cared for. Testing should be held to a minimum during this time.

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### Intravenous Alimentation

Nearly complete alimentation can now be accomplished intravenously for long periods of time. This technique requires the placement of a silastic or polyvinyl catheter into the right atrium via the jugular, subclavian or femoral veins. In the right atrium, the large volume of blood flow will immediately dilute the hyperosmolar solution of 25 percent glucose, 4 percent fibrin hydrolysate, required electrolytes and vitamins. The volume of infusion is equivalent to the maintenance water requirements and should be given at a constant rate with a pump. The maximum rate of glucose utilization is 1.3 grams per kilogram of body weight per hour. A Millipore filter in the line will remove particulate matter and microorganisms. Essential fatty acids and trace metals are supplied by transfusion of plasma twice weekly. Improved survival has occurred in patients who are unable to eat because of prolonged ileus, chronic diarrhea, intestinal fistulae, peritonitis and sepsis. Complications include septicemia (particularly *Candida*), venous thrombosis and, rarely, pulmonary embolism. This technique of parenteral alimentation is one of the most important medical advances in many years.

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### Drug Abuse

The most common mind-altering substances being abused by youth today are the hallucinogens, amphetamines and barbiturates. The hallucinogenic substances hemp (or marijuana), lysergic acid diethylamide (LSD), peyote, and mescaline all produce acute panic reactions, recurrent hallucinations, and serious psychotic change with varying frequency, but most commonly with LSD. Such untoward reactions with marijuana use are more rare due to the low content of the active